Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	MM Docket No. 87-268
and Their Impact Upon the	)	
Existing Television Broadcast	)	
Service	)	

**PARTIAL OPPOSITION OF PAXTON MEDIA GROUP, INC.
TO PETITION FOR CLARIFICATION AND PARTIAL RECONSIDERATION OF
THE SIXTH REPORT AND ORDER
SUBMITTED BY PULITZER BROADCASTING COMPANY**

PAXTON MEDIA GROUP

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TO: The Commission

PARTIAL OPPOSITION OF PAXTON MEDIA GROUP, INC. TO PETITION FOR CLARIFICATION AND PARTIAL RECONSIDERATION OF THE SIXTH REPORT AND ORDER SUBMITTED BY PULITZER BROADCASTING COMPANY

Paxton Media Group is the licensee of WPSD-TV (Channel 6) (Paducah, KY). Pursuant to Section 1.429(f) of the Commission's rules, Paxton submits this Opposition to the *Petition for Clarification and Partial Reconsideration of the Sixth Report and Order* (MM Docket No. 87-268) ("Reconsideration Petition") filed by Pulitzer Broadcasting Company on June 13, 1997.

I. Pulitzer's Request That A Power Cap Be Imposed on WPSD Is Based on A Significant Miscalculation of the Interference That WPSD Will Cause to WLKY.

In its Reconsideration Petition, Pulitzer argues that the Commission has greatly underestimated the amount of DTV-to-NTSC interference that its station, WLKY (TV) (Channel 32) (Louisville, KY), will receive during the period of transition to digital television from the DTV Channel 32 facilities authorized by the Commission for WPSD-

TV in Paducah, and from other DTV stations. The interference in question will be so significant, Pulitzer argues, that a "temporary" limit or cap should be placed on the power level and/or antenna height of the interfering stations for the full duration of the DTV transition period.

The Commission and Paxton have both concluded that the interference to WLKY during the transition period will be far from significant. Specifically, the Commission has predicted that during the transition WLKY's analog operations on channel 32 will receive new interference in 5.6 percent of the area, and 1.9 percent of the population, within the station's Grade B contour.[1/] Paxton's independent calculation of the interference that will be caused to WLKY -- by digital transmission generally and by WPSD-TV in particular -- confirms the Commission's figures. Jules Cohen, Paxton's engineering consultant, states that interference to WLKY from all digital transmission is likely to occur over an area of 1360 square kilometers (5.8 percent of its present interference-free service area), and that interference from WPSD-TV in particular is likely to occur in an area of 425 square kilometers (1.8 percent of its present interference-free service area). *See* Appendix A (Engineering Statement on Behalf of Paxton Media Group, Inc.) at 3.

Pulitzer's engineering consultant inexplicably predicts nearly twice as much interference to WLKY. The consultant in question has somehow reached the figure of 978 square kilometers of interference from WPSD-TV (*twice* the area that Mr. Cohen

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[1/] *See* Sixth Report and Order, In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service (adopted April 3, 1997), 62 Fed. Reg. 26684 (May 14, 1997) ("*Sixth Report and Order*") at Appendix B.

calculates) and 4,682 square kilometers of interference from digital transmissions in general (more than *three times* the area calculated by Mr. Cohen and the Commission). *See* Reconsideration Petition at Appendix A. The engineer did not explain the basis for his calculations, which we believe may be a result of an erroneous assumption of nondirectional rather than directional antennas.[2/]

Moreover, the correctly calculated amount of projected interference is reasonable; *i.e.*, it is substantially similar to the amount of interference that other NTSC-transmissions will face during the transition period. It is, of course, well understood that the Commission could not add 1601 new DTV channels into spectrum already occupied by 1601 analog stations *without* some new interference to analog service resulting. Accordingly, the Commission and the industry have long known that a seamless transition to digital television would depend on a very careful balancing of avoiding disenfranchisement of NTSC viewers, on the one hand, and ensuring service replication and robust implementation of DTV, on the other hand. The transition period will accordingly, as the Commission puts it, "*unavoidably* result in *some degree* of interference to both NTSC and DTV stations." *Sixth Report and Order* at ¶ 85 (emphasis added).[3/] A brief glance at the DTV Table indicates that analog

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[2/] This assumption is contrary to the instructions of OET Bulletin No. 69, which has become available since Pulitzer filed its Reconsideration Petition. *See* OET Bulletin No. 69 at 8 ("The receiving antenna is assumed to have a directional gain pattern . . . .")

[3/] The Commission has sought all along "to minimize interference to all stations and to balance unavoidable interference among NTSC and DTV stations equally." *Sixth Report and Order* ¶ 87. *See id.* (noting that Commission in composing the DTV Table "attempted to minimize interference to all stations and to balance *unavoidable*

(continued...)

signals during the transition period will receive anywhere from *no* new interference to *30 percent* by area[4/] (and over 10 percent by population[5/]). In short, the amount of new interference that WLKY is likely to face during the transition -- a mere 5 or 6 percent of its Grade B contour -- is *well within* the range deemed acceptable by the Commission.[6/]

II. Pulitzer Has Itself Asked To Deviate From the DTV Table and Cause Additional Interference To Existing NTSC Service.

On June 17, 1997, Pulitzer filed three Form 301 applications for DTV construction permits, each of which requests permission to exceed the facilities specifications of the DTV Table and each of which specifically acknowledges the proposed changes will cause *additional interference* to other stations (additional interference that is not explicitly permitted by the rules).[7/] In contrast, Paxton seeks

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[3/](...continued)
interference between both NTSC and DTV stations equally in developing the DTV Table of Allotments") (emphasis added). With respect to the DTV-to-NTSC interference that *will* be caused, the Commission describes a variety of private (*i.e.*, voluntary) solutions to mitigate the problem. *See, e.g., Sixth Report and Order* ¶ 42.

[4/] *See Sixth Report at Order* (Appendix B) at B-24 (WJBK-TV) (Detroit, MI) (NTSC 2).

[5/] *See Sixth Report and Order* (Appendix B) at B-19 (WSJV) (Elkhart, IN) (NTSC 28).

[6/] Paxton has undertaken in informal conversations to reassure Pulitzer that its engineer miscalculated the interference that WPSD-TV will cause to WLKY. Paxton hopes that under the circumstances, Pulitzer may recede from the portion of its Reconsideration Petition that requests a "power cap" for WPSD-TV.

[7/] The applications in question relate to KETV (Omaha, NE) (DTV 20), KOAT (Albuquerque, NM) (DTV 21), and KCCI (De Moines, IA) (DTV 31). Each requests a power level or antenna height in excess of that assigned in the DTV Table, and each includes an engineering statement claiming -- but not documenting -- a "*de minimis*" change in interference levels to neighboring NTSC service.

only to preserve its right to operate its DTV channel within the constraints of the *Sixth Report and Order*.[8/]

In the absence of the specific guidance of OET Bulletin No. 69 (not released until July 2, 1997), Pulitzer was not able to identify in the applications how much additional interference would be caused (or to whom). Nor is it clear, at this juncture, how much -- if any -- additional interference will be approved in nonconforming DTV construction permit applications. Paxton takes, at this time, no position on the latter question. The point is simply that the basic theme of Pulitzer's Petition for Reconsideration (that the small amount of interference to be caused by Paxton is somehow unacceptable) is contradicted by its own DTV Construction Permit Applications.

[8/] The reduction in service caused by Pulitzer's proposed power cap on WPSD-TV's digital facilities would cause loss of service over 15,400 square kilometers and to 201,000 people within the station's NTSC Grade B contour -- *i.e.*, roughly one-quarter of the people and one third of the area. *See* Appendix A at 4. In short, Pulitzer's proposal would cause substantial viewer disenfranchisement and violate the Commission's and the industry's replication principle.

III. Conclusion

Paxton Media Group vigorously urges the Commission to deny the Pulitzer Reconsideration Petition, which vastly overstates the extent of the interference that WPSD-TV's digital transmissions will cause to WLKY (*i.e.*, there is no interference additional to that interference the Commission already noted).

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July 18, 1997

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CERTIFICATE OF SERVICE

I, Erika F. King, hereby certify that a copy of the foregoing **Partial Opposition of Paxton Media Group, Inc. to Petition for Clarification and Partial Reconsideration of the Sixth Report and Order Submitted by Pulitzer Broadcasting Company**, was sent this 18th day of July, 1997, by first class mail, postage prepaid to the following:

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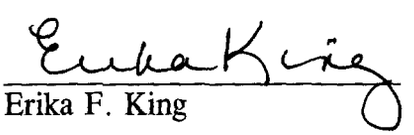

Erika F. King

Jules Cohen, P.E.
Consulting Engineer

ORIGINAL

ENGINEERING STATEMENT ON BEHALF OF
PAXTON MEDIA GROUP, INC.
WPSD-TV, PADUCAH, KENTUCKY

This engineering statement, prepared on behalf of Paxton Media Group, Inc., licensee of television broadcast station WPSD-TV, Paducah, Kentucky, is in support of a response to Petition for Clarification and Partial Reconsideration of the Sixth Report and Order Submitted by Pulitzer Broadcasting Company ("Petition") in MM Docket No. 87-268.

Pulitzer Broadcasting Company is the licensee of WLKY(TV), operating on channel 32 at Louisville, Kentucky. WPSD-TV has been assigned channel 32 for digital television at Paducah, Kentucky. The assignment specifies maximum effective radiated power of 1,000 kilowatts at an antenna height above average terrain of 482 meters. WPSD-TV is 306.5 kilometers (190.5 miles) from WLKY. The Petition alleges that, at the assigned power level, the digital operation of WPSD-TV will cause substantial interference to the reception of WLKY; accordingly, the Petition requests that the Commission require WPSD-TV (and other stations also alleged to cause interference to WLKY) to operate its digital television station at reduced power during the transition period. An independent analysis indicates that the Petition exaggerates the extent of interference calculated to be caused to WLKY by WPSD-TV (and other stations). Furthermore, digital operation of WPSD-TV at power reduced to avoid interference to the NTSC operation of WLKY would prevent reception of

digital WPSD-TV television within a substantial part of the WPSD-TV NTSC coverage area.

In Appendix A to the Petition[1], the engineering consultant for WLKY alleges that interference from the digital operation of WPSD-TV, operating with its assigned facilities, will cause interference to the extent of 978 square kilometers within the WLKY service area, and that the total interference from digital operations will amount to 4,682 square kilometers. The total interference loss is claimed to amount to thirty percent of the WLKY service area. Nowhere in the engineering statement is a description of how the stated conclusions were determined.

An independent analysis of the interference likely to be found within the WLKY service area during the transition period indicates that the claims set forth in the foregoing paragraph are exaggerated substantially.

To determine the extent of interference to be expected by WLKY during the transition period, a study was requested from the TA Services of the Institute for Telecommunications Services (ITS), a division of the National Institute for Standards and Technology (NIST), National Technology and Information Administration (NTIA) of the U.S. Department of Commerce. The ITS employs the same methodology as has been used by the Commission in its studies of the impact of digital television on the NTSC service. The Longley-Rice radio propagation model was developed at the ITS and its predecessor,

[1] Engineering Statement of John F.X. Browne, P.E., dated June 11, 1997.

the National Bureau of Standards. In its recently released OET Bulletin No. 69[2], the Commission refers the reader to an ITS report[3] as the source for the computer code. That code with some January 30, 1985, modifications described by G.A. Hufford, constitute Version 1.2.2, the version used by the FCC and by the ITS.

The ITS reported that interference to WLKY from the digital operation of WPSD-TV is likely to occur in an area of 424.86 square kilometers, and that the entire area of interference from all digital assignments would occur in an area of 1360 square kilometers. The ITS reported also that the present interference-free WLKY area includes 23,630 square kilometers. Based on these figures, the potential WLKY loss from the WPSD-TV digital operation amounts to 1.8 percent of the present WLKY interference-free service area. The total potential loss by WLKY from digital operations amounts to 5.8 percent.

Avoidance of interference by the digital operation of WPSD-TV within the WLKY Grade B contour (including the 6 dB factor for the analog receiving antenna front-to-back ratio) would require reduction of the average digital effective radiated power to 219 kilowatts at the assumed height above average terrain of 482 meters. At that power and antenna height, the population within the WPSD-TV digital noise limited f(50,90) contour (40.5

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[2] Longley-Rice Methodology for Evaluating TV Coverage and Interference, July 2, 1997.

[3] NTIA Report 82-100, A Guide to the Use of the ITS Irregular Terrain Model in the Area Prediction Mode, authors G.A. Hufford, A.G. Longley and W.A. Kissick, U.S. Department of Commerce, April 1982.

dBμ) would be 711,100 in an area of 31,500 square kilometers. The present Grade B (47 dBμ), f(50,50) contour of WPSD-TV includes 912,900 people in an area of 46,900 square kilometers. All of the loss area for the digital operation is within the WPSD-TV, NTSC Grade B contour. The loss of 201,800 people constitutes 22 percent of the NTSC coverage. The loss of 15,400 square kilometers constitutes 33 percent of the NTSC coverage.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 15, 1997.

Jules Cohen, P.E.